THE RISE OF ARTIFICIAL INTELLIGENCE

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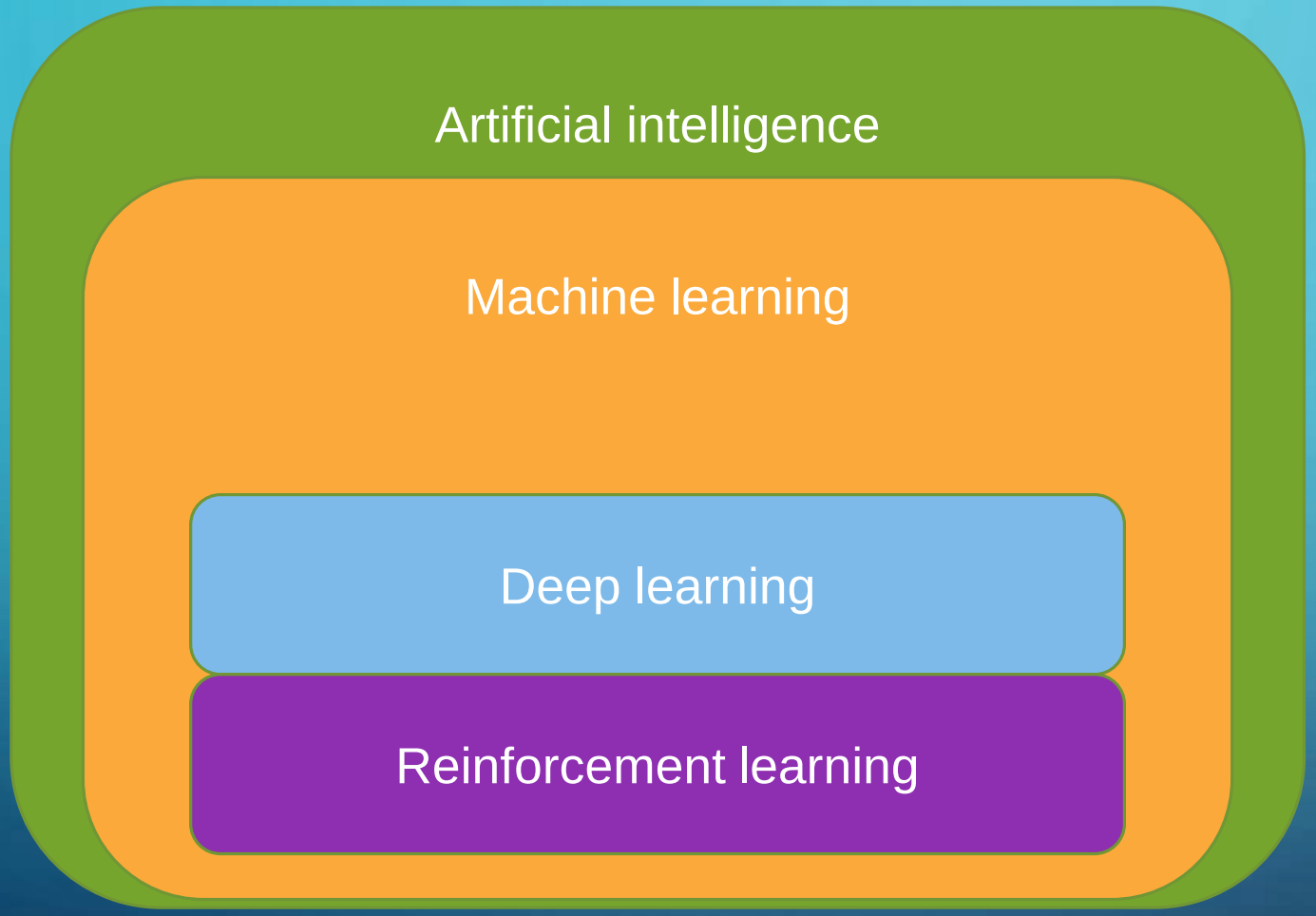
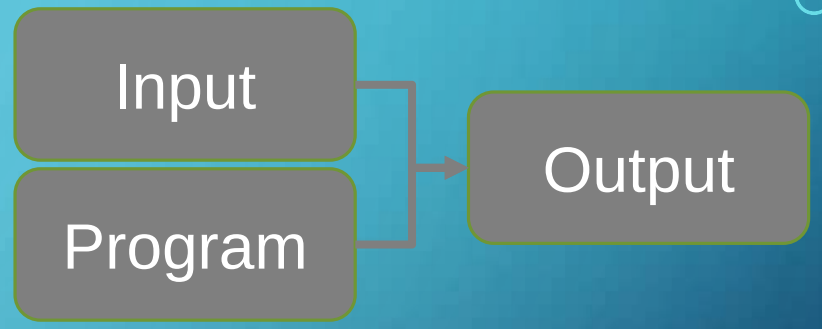
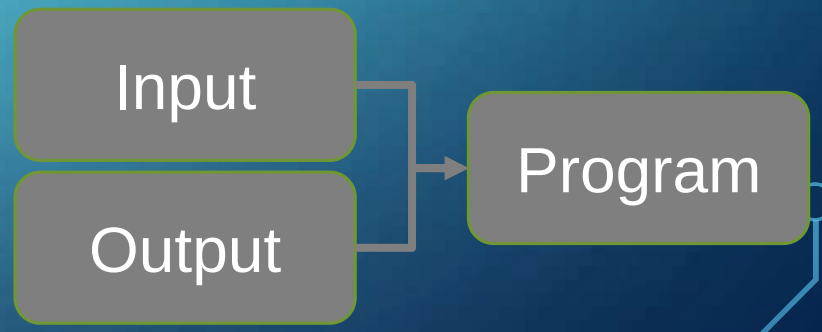
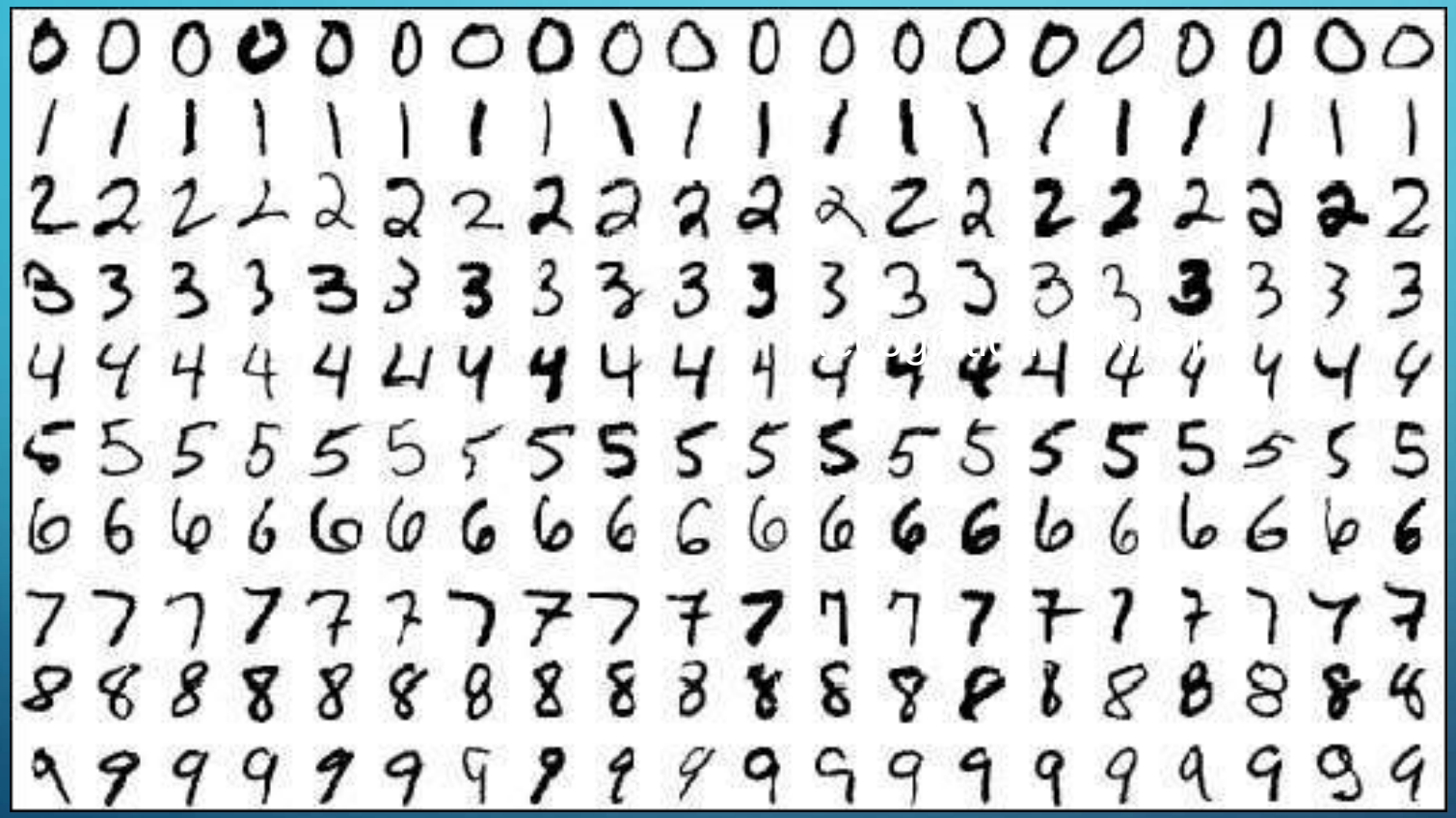
ARTIFICIAL INTELLIGENCE







RECOGNITION: MNIST (70K)



Input: picture of digit
Output: digit

Human error: 2.5%
Machine error: 0.7% (1998)
0.2% (2012)

http://yann.lecun.com/exdb/mnist/

RECOGNITION: 年賀状

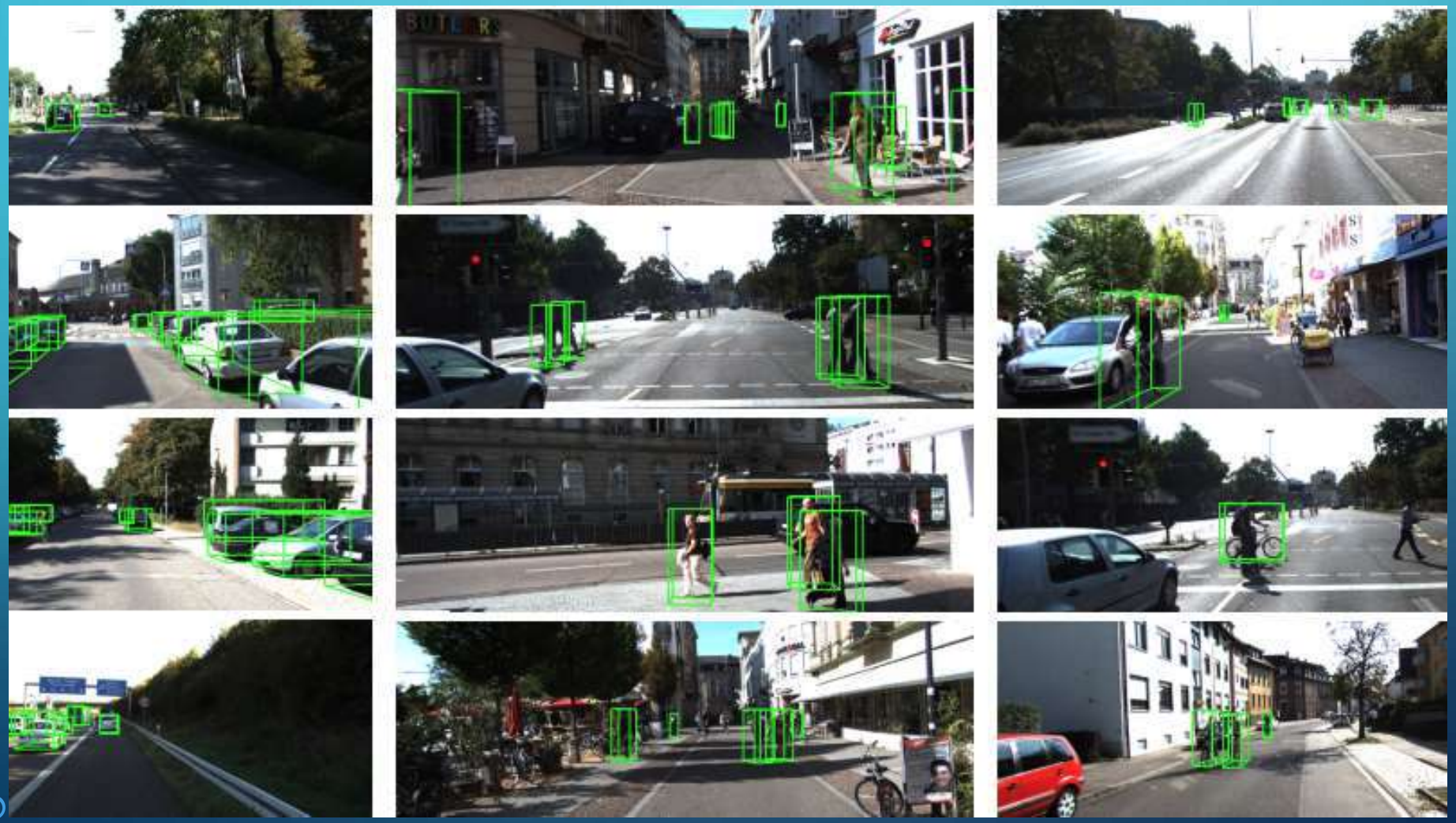
RECOGNITION: IMAGENET (14M)

Input: image
Output: object

Human error: 5.0%
Machine error: 25% (2011)
16% (2012)
11% (2013)
3.5% (2015)
2.2% (2017)

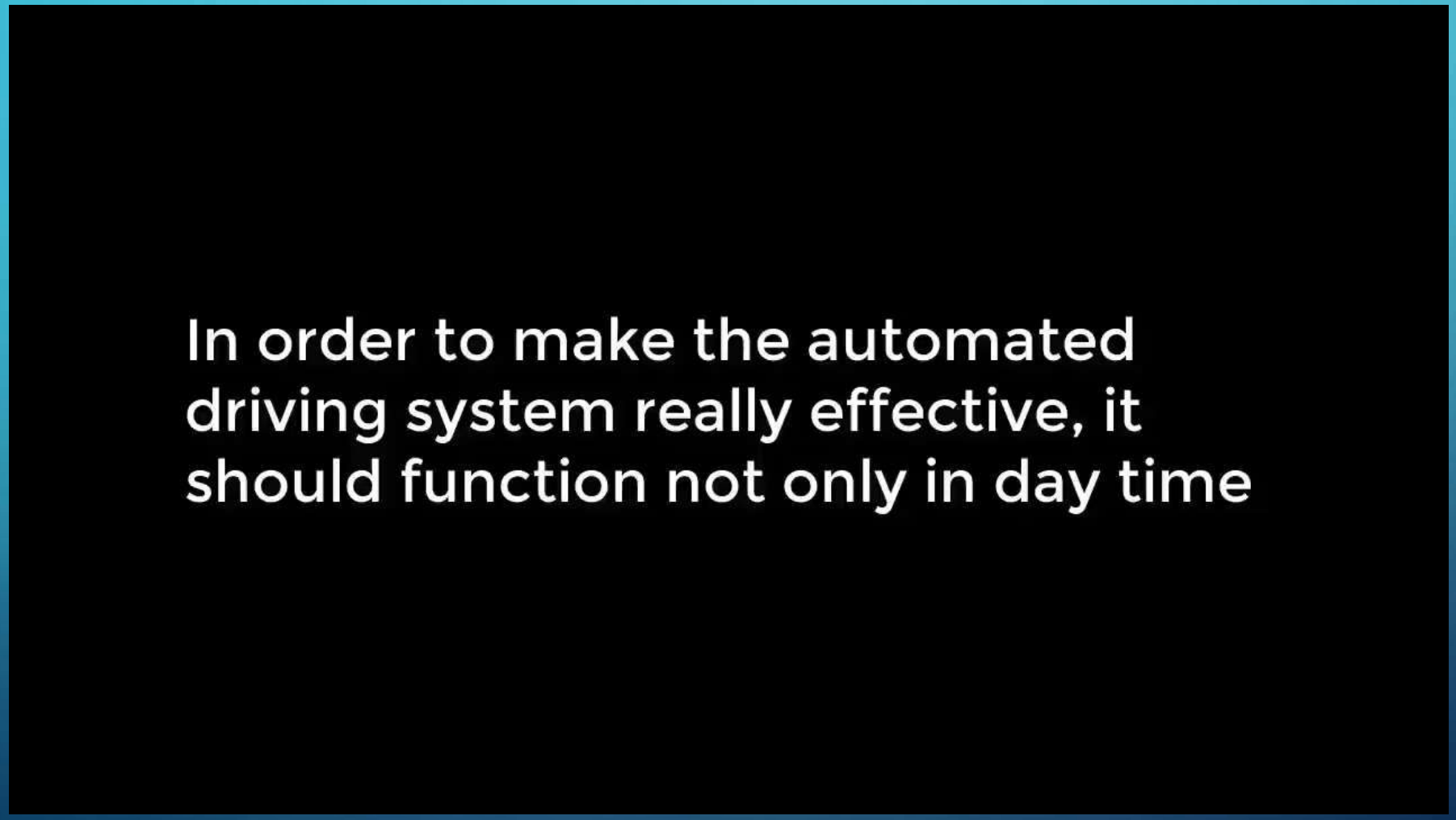
http://image-net.org/

AUTONOMOUS DRIVING

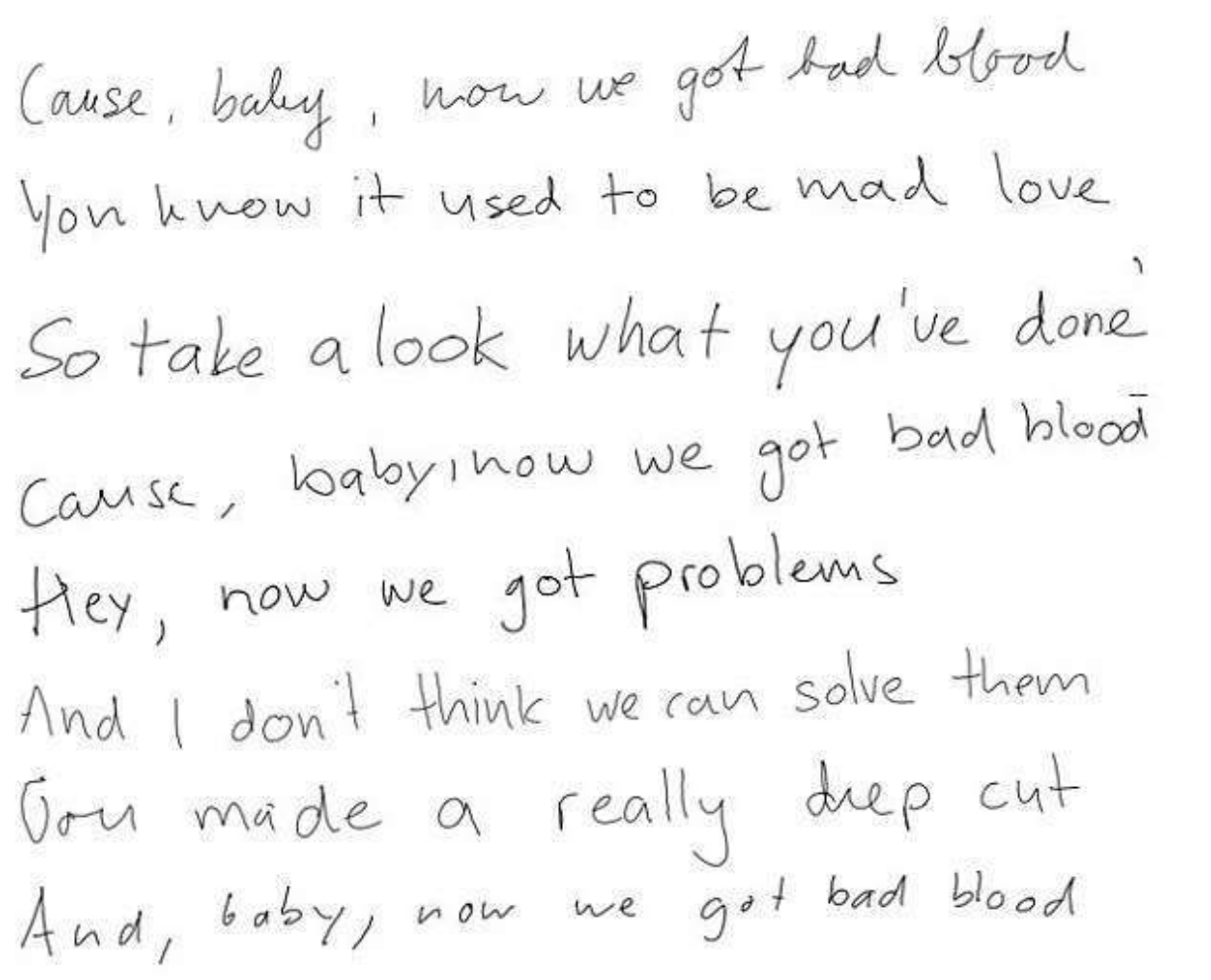


Apple

AUTONOMOUS DRIVING



GENERATION: HANDWRITING



Alex Graves, University of Toronto

GENERATION: SPEECH AND MUSIC

Connecative

Parametric

WaveNet

Piano

Deep Mind

DEEP LEARNING ULAANBAATAR 2018